

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

SEQUENCE LISTING

#3



<110> Gordon, Robert D.  
5 Sprengel, Jörg J.  
Yon, Jeffrey R.  
Dijkmans, Josiena J.H.  
Gosiewska, Anna  
Dhanaraj, Sridevi N.  
Xu, Jean  
10 <120> Vascular Endothelial Growth Factor-X  
  
<130> B0192/7011  
  
15 <140> US 09/468,647  
<141> 1999-12-21  
  
<150> GB 9828377.3  
20 <151> 1998-12-22  
  
<150> US 60/124,967  
<151> 1999-03-18  
  
<150> US 60/164,131  
25 <151> 1999-11-08  
  
<160> 29  
  
<170> PatentIn Ver. 2.0  
30 <210> 1  
<211> 323  
<212> PRT  
<213> Homo sapiens  
35 <400> 1  
Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn Lys Glu Gln  
1 5 10 15  
40 Tyr Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr  
20 25 30  
Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn  
35 40 45  
45 Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile  
50 55 60  
50 Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp  
65 70 75 80  
Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr  
85 90 95  
55 Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile  
100 105 110  
Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe  
115 120 125  
60 Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro Gln  
130 135 140

Phe Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala Leu Pro  
145 150 155 160

5 Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr Leu Glu Asp  
165 170 175

Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu Asp Leu Glu Asp  
180 185 190

10 Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe Gly  
195 200 205

Arg Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val Arg  
15 210 215 220

Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu Glu  
225 230 235 240

20 Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val Lys  
245 250 255

Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu Cys  
260 265 270

25 Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu Gln  
275 280 285

Leu Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp  
30 290 295 300

Val Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser  
305 310 315 320

35 Thr Gly Gly

<210> 2  
40 <211> 345  
<212> PRT  
<213> Homo sapiens

<400> 2  
45 Met Ser Leu Phe Gly Leu Leu Leu Leu Thr Ser Ala Leu Ala Gly Gln  
1 5 10 15

Arg Gln Gly Thr Gln Ala Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe  
20 25 30

50 Ser Ser Asn Lys Glu Gln Tyr Gly Val Gln Asp Pro Gln His Glu Arg  
35 40 45

Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro  
55 50 55 60

His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val  
65 70 75 80

60 Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu  
85 90 95

Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu  
100 105 110

5 Glu Pro Ser Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr  
115 120 125

Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe  
130 135 140

10 Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr  
145 150 155 160

Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu  
165 170 175

15 Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala  
180 185 190

Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp  
20 195 200 205

Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly  
210 215 220

25 Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu  
225 230 235 240

Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser  
245 250 255

30 Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro  
260 265 270

Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu  
35 275 280 285

His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys  
290 295 300

40 Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu  
305 310 315 320

His Lys Ser Leu Thr Asp Val Ala Leu Glu His His Glu Glu Cys Asp  
325 330 335

45 Cys Val Cys Arg Gly Ser Thr Gly Gly  
340 345

50 <210> 3  
<211> 1035  
<212> DNA  
<213> Homo sapiens

55 <400> 3  
atgagetect tcgggcttct cctgctgaca tctgccctgg ccggccagag acagggact 60  
caggcgaaat ccaaccttag tagtaaattc cagtttcca gcaacaagga acagaacgga 120  
gtacaagatc ctcagcatga gagaattatt actgtgtcta ctaatggaag tattcacagc 180  
ccaaggtttc ctcatactta tccaagaat acggcttgg tatggagatt agtagcagta 240  
60 gaggaaaatg tatggataca acttagctt gatgaaagat ttgggcttga agacccagaa 300  
gatgacatat gcaagtatga ttttgtagaa gttgaggaac ccagtgtatgg aactatatta 360  
gggcgcgttgt gtggttctgg tactgtacca ggaaaacaga tttctaaagg aaatcaaatt 420

aggataagat ttgttatctga tgaatatttt ccttctgaac cagggttctg catccactac 480  
aacattgtca tgccacaatt cacagaagct gtgagtccctt cagtgctacc cccttcagct 540  
ttgccactgg acctgcctaa taatgctata actgccttta gtacccttggaa agaccttatt 600  
cgatatatccg aaccagagag atggcagttg gacttagaaat atctatatacg gccaaacttgg 660  
5 caacttcttg gcaaggcttt tggttttggaa agaaaatcca gagtggttggaa tctgaacctt 720  
ctaacagagg aggttaagatt atacagctgc acacctcgta acttctcagt gtccataagg 780  
gaagaactaa agagaaccga taccatttc tggccaggtt gtctccctgggt taaacgctgt 840  
ggtgggaact gtgcctgttg tctccacaat tgcaatgaat gtcaatgtgt cccaaaggaaa 900  
gttactaaaa aataccacga ggtccttcag ttgagaccaa agaccgggtt caggggattt 960  
10 cacaatcac tcaccgacgt ggccttggag caccatgagg agtgtgactt tttgtgcaga 1020  
gggagcacag gagga 1035

<210> 4  
<211> 22  
15 <212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

20 <400> 4  
aaaatgtatg gatacaactt ac 22

<210> 5  
25 <211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
30 <223> Description of Artificial Sequence: primer

<400> 5  
gtttgatgaa agatttgggc ttg 23

35 <210> 6  
<211> 22  
<212> DNA  
<213> Artificial Sequence

40 <220>  
<223> Description of Artificial Sequence: primer

<400> 6  
tttctaaagg aaatcaaattt ag 22  
45 <210> 7  
<211> 20  
<212> DNA  
<213> Artificial Sequence

50 <220>  
<223> Description of Artificial Sequence: primer

<400> 7  
55 gataagattt gtatctgatg 20

<210> 8  
<211> 17  
<212> DNA  
60 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer  
<400> 8  
5 gatgtctcct ctttcag 17  
<210> 9  
<211> 18  
<212> DNA  
<213> Artificial Sequence  
10 <220>  
<223> Description of Artificial Sequence: primer  
<400> 9  
15 gcacaactcc taattctg 18  
<210> 10  
<211> 18  
<212> DNA  
20 <213> Artificial Sequence  
<220>  
<223> Description of Artificial Sequence: primer  
25 <400> 10  
agcacacctgat tccgttgc 18  
<210> 11  
<211> 20  
30 <212> DNA  
<213> Artificial Sequence  
<220>  
<223> Description of Artificial Sequence: primer  
35 <400> 11  
tagtacatacg aatgttctgg 20  
<210> 12  
40 <211> 19  
<212> DNA  
<213> Artificial Sequence  
<220>  
45 <223> Description of Artificial Sequence: primer  
<400> 12  
aagagacata cttctgtac 19  
50 <210> 13  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
55 <220>  
<223> Description of Artificial Sequence:primer  
<400> 13  
60 ccaggtacaa taagtgaact g 21  
<210> 14  
<211> 28

<212> DNA  
<213> Artificial Sequence  
  
5 <220>  
<223> Description of Artificial Sequence:primer  
  
<400> 14  
ccttttagaaa tctgtttcc tggtacag 28  
  
10 <210> 15  
<211> 31  
<212> DNA  
<213> Artificial Sequence  
  
15 <220>  
<223> Description of Artificial Sequence:primer  
  
<400> 15  
ggaaaatatt catcagatac aaatcttatac c 31  
20 <210> 16  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
25 <220>  
<223> Description of Artificial Sequence:primer  
  
<400> 16  
30 ggtccagttgg ccaaagctgaa gg 22  
  
<210> 17  
<211> 29  
<212> DNA  
35 <213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence:primer  
  
40 <400> 17  
ctgggtcaag atatcgaata aggtcttcc 29  
  
<210> 18  
<211> 24  
45 <212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence:primer  
50 <400> 18  
tttgtttaaa ccttgggaaa ctgg 24  
  
<210> 19  
55 <211> 21  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
60 <223> Description of Artificial Sequence:primer  
  
<400> 19

gtccagggttt	tgctttgatc	c	21				
5	<210>	20					
	<211>	30					
	<212>	DNA					
	<213>	Artificial Sequence					
	<220>						
10	<223>	Description of Artificial Sequence:primer					
	<400>	20					
	aattggatcc	gagagtggtg	gatctgaacc	30			
15	<210>	21					
	<211>	30					
	<212>	DNA					
	<213>	Artificial Sequence					
	<220>						
20	<223>	Description of Artificial Sequence:primer					
	<400>	21					
	aattggatcc	ggaaagaaaa	tccagagtgg	30			
25	<210>	22					
	<211>	40					
	<212>	DNA					
	<213>	Artificial Sequence					
30	<220>						
	<223>	Description of Artificial Sequence:primer					
	<400>	22					
	ggttgaattc	attatttttt	agtaactttg	cttgggacac	40		
35	<210>	23					
	<211>	31					
	<212>	DNA					
	<213>	Artificial Sequence					
40	<220>						
	<223>	Description of Artificial Sequence:primer					
	<400>	23					
45	aattgaattc	attatcctcc	tgtgctccct	c	31		
	<210>	24					
	<211>	60					
	<212>	DNA					
50	<213>	Artificial Sequence					
	<220>						
	<223>	Description of Artificial Sequence: primer					
55	<400>	24					
	aattggatcc	ggagtctcac	catcaccacc	atcatgaatc	caacctgagt	agtaaattcc	60
	<210>	25					
	<211>	34					
60	<212>	DNA					
	<213>	Artificial Sequence					

<220>  
 <223> Description of Artificial Sequence: primer  
 <400> 25  
 5 aattgaattc gctatccctcc tgtgctccct ctgc  
 <210> 26  
 <211> 111  
 <212> PRT  
 10 <213> Homo sapiens  
 <400> 26  
 Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr Asn  
 1 5 10 15  
 15 Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr  
 20 25 30  
 20 Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln  
 35 40 45  
 25 Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile  
 50 55 60  
 30 Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile  
 65 70 75 80  
 Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser  
 85 90 95  
 35 Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe  
 100 105 110  
 40 <210> 27  
 <211> 168  
 <212> PRT  
 <213> Homo sapiens  
 45 Met Ala Met Asp Ile Gly Ile Asn Ser Asp Pro Glu Ser His His His  
 1 5 10 15  
 His His His Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn  
 20 25 30  
 50 Lys Glu Gln Asn Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr  
 35 40 45  
 55 Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr  
 50 55 60  
 Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn  
 65 70 75 80  
 Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro  
 85 90 95  
 60 Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Glu Pro Ser  
 100 105 110  
 Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly

	115	120	125
	Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp		
5	130	135	140
	Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val		
	145	150	155
	160		
10	Met Pro Gln Phe Thr Glu Ala Val		
	165		
	<210> 28		
15	<211> 504		
	<212> DNA		
	<213> Homo sapiens		
	<400> 28		
20	atggccatgg atatcggaat taattcgat ccggagtc accatcacca ccatcatgaa 60		
	tccaacctga gtagtaaatt ccagtttcc agcaacaagg aacagaacgg agtacaagat 120		
	cctcagcatg agagaattat tactgtgtct actaatggaa gtattcacag cccaagggtt 180		
	cctcatactt atccaagaaa tacggcttgc gtatggagat tagtagcagt agaggaaaat 240		
	gtatggatac aacttacgtt ttagtggaa tttgggcttg aagaccaga agatgacata 300		
25	tgcaagtatg attttgtaga agttgaggaa cccagtgtatg gaactatatt agggcgctgg 360		
	tgtggttctg gtactgtacc aggaaaacag atttctaaag gaaatcaaatt taggataaga 420		
	tttgtatctg atgaatattt tccttctgaa ccagggttct gcatccacta caacattgtc 480		
	atgccacaat tcacagaagc tgtg 504		
30	<210> 29		
	<211> 132		
	<212> PRT		
	<213> Homo sapiens		
	<400> 29		
35	Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe		
	1	5	10
			15
	Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val		
	20	25	30
40	Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu		
	35	40	45
45	Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val		
	50	55	60
	Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu		
	65	70	75
			80
50	Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu		
	85	90	95
	Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr		
55	100	105	110
	Asp Val Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly		
	115	120	125
60	Ser Thr Gly Gly		
	130		